DOCUMENT RESUME

ED 068 191 PS 005 973

AUTHOR	Talcott, Frederick W.; Hedrick, James L.
TITLE	Costs of Day Care. Volume 1. Final Report: Part IV.
INSTITUTION	Institute for Interdisciplinary Studies, Minneapolis, Minn.
SPONS AGENCY	Office of Economic Opportunity, Washington, D.C.
PUB DATE	Dec 71
NOTE	56p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Child Care; Comparative Analysis; *Cost Effectiveness; Data Analysis; *Day Care Programs; *Day Care Services; Disadvantaged Youth; Elementary School Students; Family Environment; Federal Aid; Low Income Groups; Preschool Children; Private Financial Support; *Program Costs; Research; Technical Reports; Voluntary Agencies

ABSTRACT

Results of a study of the costs of providing day care services are presented. The sections of the report are as follows: 1. Introduction; 2. Issues in Day Care Cost Analysis--use of cost information, cost structure, classification of day care types, organizational level to be addressed, total vs. per-child costs, economies of scale, diversity of services included, treatment of administrative and overhead costs, and in-kind contributions; 3. Day Care Cost Information--general, delivery mechanisms in the PSG project, relationship to alternative Federal strategies, family day care costs, industrial day care costs, proprietary systems of day care centers, and non-profit day care center costs; and 4. Summary of Day Care Cost Workshop. A bibliography containing 30 references is provided. (For related documents, see PS 005 969-972, 974-983.) (AL)

ED 068191

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This report is submitted to the Office of Economic Opportunity by the Day Care Policy Studies Group in fulfillment of Contract B00-5121.

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December, 1971

PS 005973

Final Report - Part IV
COSTS OF DAY CARE
VOLUME I

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Approved for
INSTITUTE FOR INTERDISCIPLINARY STUDIES

for James J. Hodur
Seldon P. Todd,
Director

FOREWORD

This final report is submitted to the Office of Economic Opportunity by the Day Care Policy Studies Group in fulfillment of Contract BOO-5121. This report presents the research undertaken by the Day Care Policy Studies Group and does not necessarily represent the policies or positions of the Office of Economic Opportunity.

The final report is presented in two sections; Part I Alternative Federal Day Care Strategies for the 1970's: Summary Report, and Parts II through X, supporting appendices to the summary report. The following separately bound volumes are included:

Parts: I Alternative Federal Day Care Strategies of the 1970's: Summary Report

II Volume 1 Child Care Programs: Estiimation of Impacts and Evaluation of Alternative Federal Strategies

Volume 2 Appendixes to Child Care Programs: Estimation of Impacts and Evaluation of Alternative Federal Strategies

Volume 3 Measurements of Impacts of Child Care Programs

III Existing Day Care Legislation

IV Volume 1 Costs of Day Care

Volume 2 Appendix to Costs of Day Care: Proceedings of a Workshop

V Challenges in Day Care Expansion

VI Public Opinion Toward Day Care

VII Types of Day Care and Parents' Preferences

VIII		Future Trends Affecting Day Care and Preschool Education
IX	Volume 1	Training Programs for Child Care Personnel
	Volume 2	Appendix to Training Programs for Child Care Personnel
X	Volume 1	Day Care: An Annotated Bibliography
	Volume 2	Bibliography Supplement for September, October, and November 1971
	Volume 3	Bibliography Supplement for December 1971

In addition to this final report and supporting technical appendixes, the Day Care Policy Studies Group has provided the following supporting documents to the Office of Economic Opportunity in fulfillment of this contract.

An Explication of Some Alternative Federal Day Care Strategies for the 70's

Potential Impacts from Child Care

Considerations in the Evaluation of Alternative Funding Mechanisms for Day Care Services

The Effect of Present and Proposed Tax Deductions for Child Care

Emerging Findings and Implications for the Implementation of the Day Care Provisions of H.R.1 and OEO R & D in Day Care

Pending Federal Legislation Pertaining to Day Care

Review of Pending Day Care Legislation

Benefit/Cost Analysis of Day Care Programs Under a Family Assistance Plan

The Public's Opinion of Day Care

Paraprofessionals in Day Care

Some Implications of the Provision of Day Care Services

Day Care: An Annotated Bibliography Monthly Supplements

Questions Relating to the Federal Role in Day Care (Unpublished)

Evidence of Interest by States and Local Governments in Implementing Day Care and Preschool Educational Programs (Unpublished)

COSTS OF DAY CARE

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1. INTRODUCTION

One of the tasks of the IIS Day Care Policy Studies Group was to investigate the costs of providing day care services, in order to draw conclusions about appropriate federal strategies for providing day care and child development services. The results of the study are presented herein.

Cost analysis of public programs entails decisions on the structuring of the analysis tasks, the gathering of appropriate data, and the presentation of results. A number of challenges for the cost analysis task were presented as a consequence of the policy study nature of the overall project, and as a result of the diverse character of day care services as they now exist. These challenges shaped the nature of the cost analysis which was performed, and are discussed in Section 2 as a series of issues in day care cost analysis.

In Section 3, the day care cost information that has been assembled by the Policy Studies Group (PSG) is presented. Four representative types of delivery mechanisms are considered. For each of these, normative cost estimates are given under the categories of one-time costs, operating costs, administration costs, and assistance costs. The data that had been used to arrive at those cost estimates is briefly noted, in order to make clear the limitations caused by the constraints of the diverse data sources and the more basic problem of applying historical findings to future decisions. The applicability of each of the delivery mechanisms to the major federal day care policy alternatives being considered by IIS is indicated.

A workshop on the costs of day care sponsored by IIS in May 1971 was

attended by many persons having experience and expertise in the analysis and provision of day care services. The workshop had direct bearing upon the issues in day care cost analysis and upon the findings of the cost analysis task. A summary of that workshop is given in Section 4. The proceedings of the workshop are presented as a separately bound appendix to this report.

2. ISSUES IN DAY CARE COST ANALYSIS

Investigating the costs of day care and child development services within the framework of a policy study presents the cost analyst with challenges which can best be addressed as a series of issues.

- The use of the cost information: Policy -- planning -- operation
- The cost structure to be used (Input vs. output; the level of aggregation of detail)
- Classification scheme for the types of day care and child development services
- What units of service to address; what organizational level to investigate
- Total costs vs. per-child costs
- How to handle the diversity of services provided
- Economies of scale
- Allocation of administration and overhead costs to other categories
- Accounting for in-kind contributions

Each of these issues is addressed as it relates to this study.

Use of Cost Information

The intended use of the cost information affects the way in which the cost analysis task should proceed. The organization of the cost information, the level of detail employed, the requirements for timeliness, and the treatment of other aspects of the cost analysis activity are influenced by the use that is to be made of the cost information. Three basic needs for cost data are in program operation, program planning and policy planning.

Cost information that is used for program operation needs to be very current, must be geared to a specific setting and its characteristics, is generally tied to an existing accounting system, and is oriented to the program inputs (personnel, materials, facilities, etc). Cost categories may have a high degree of detail.

Cost information for program planning purposes is based on some conceptual models of program operation, but these models have less detail than the framework used for program operation. Cost figures can be derived from historical data, from current experience from relevant programs, and from "ground-up" constructions of cost estimates using abstract models. There is need for both input and output (i.e., functional) cost categories.

Policy planning requires cost information on a broad range of service models. The most useful cost data is organized according to program functions, at a high level of aggregation. In order to handle diverse policy alternatives, relatively abstract models of service operation must be employed, resulting in problems concerning how to handle the costs of various services that may or may not be included. Also, there is normally a wide divergence between the service model and available information. To include all the delivery mechanism possibilities that need to be considered in policy planning, the cost structure employed cannot be tied to any one particular cost accounting system.

The use of the cost information is the central question in shaping the cost analysis task. The focus of the PSG is on policy questions. The discussions following all relate to the general observations made here on the impact of this policy orientation on the cost analysis task.

Cost Structure

For the purposes of the PSG, the appropriate focus is on the costs of

the functions of the day care delivery mechanisms. The cost breakdown structure employed should show costs by outputs, or functional categories (rather than inputs). The cost structure should also differentiate between one-time costs and recurring annual costs. Often, however, the distinctions between one-time and annual costs are unclear. For example, a day care provider can choose to rent or purchase a facility, and purchase costs can also appear as annual mortgage costs. The procedure adopted is to report one-time costs that do occur, but also to show the impact on annual costs of the amortization and interest elements of such a purchase.

The level of detail should be fairly aggregated, so as to allow consideration of a broad range of policy alternatives within a common structure. A number of participants at the Day Care Cost Workshop expressed agreement with this strategy.

Classification of Day Care Types

Two criteria for the selection of a classification scheme for the services under study are:

- The classification scheme must be relevant to the policy alternatives under consideration.
- The categories must be defined in a meaningful way. It must be possible to make clear distinctions between categories.

The selection of a classification scheme is tempered by the realities of data availability. In this study, clear distinctions could be made between many provider types, but data is severely limited in all areas. Thus, a division of day care services into four different categories was made, as a compromise between what was desired and what was possible.

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Organizational Level to Be Addressed

The costs of providing day care services with federal assistance consist (1) of those resources directly associated with the local level service delivery mechanisms, and (2) of those resources expended in the administration and channeling of funds to the local level from the governmental structures above it. The question arises whether to consider these costs separately or as a total package.

In the case of day care, a certain degree of separation exists between the service delivery mechanisms and the administrative overlays above them; a given funding structure can be used for supporting various kinds of day care, and a given type of day care can (and presently does) receive funding through various channels. While there may be interactions among the costs of the delivery mechanisms and the admininstrative overlays, there is little available evidence of this to work with. Discussions at the Day Care Cost Workshop illustrated the diversity of opinion that exists about the relationships among day care delivery mechanisms and funding mechanisms. Thus, it makes sense to consider the costs of the service delivery mechanisms separately from their administrative and funding settings.

Total vs. Per-Child Costs

If we are to follow the suggestion of the preceding section and consider the costs of the service delivery mechanisms separately from the funding and administrative structure above them, the question of total vs. per-child costs can be addressed in the following manner.

To the extent that cost estimates are possible for the administrative functions, total costs should be reported, since these costs are more likely to vary with factors other than number of children (e.g., number of states

or municipalities directly involved). The question of total vs. per-child costs for the delivery mechanisms depends upon the use to be made of that data and the existence of economies of scale.

If there were significant variations of per-child costs with the size of the enrollment within the service delivery units, then it would be most appropriate to display total costs for a center or local program as a function of the enrollment. Some variation does exist, but it is limited in scope, because of the labor-intensive nature of day care. In addition, the available evidence does not show this variation to be very systematic. For policy purposes, per-child-year costs are more convenient for evaluating alternative strategies involving competing delivery mechanisms. Thus, we have chosen to display costs on a child-year basis.

Another aspect of unit costs -- one which was discussed at some length in the Day Care Cost Workshop -- is the effect of enrollment vs. attendance figures for per-child costs. Since most programs experience a significant degree of absenteeism, costs measured on one basis can differ from those measured on the other basis. In this study, we accept average daily fulltime attendance as the appropriate basis of measurement. In many cases, however, it is not possible to know which basis was used in a particular cost study, so that there is room for doubt as to the consistency of the costs reported here.

Economies of Scale

As indicated in the discussion above, evidence of economies of scale in the provision of day care services is limited. The measurement of economies from increased program size is difficult because of the problems of measuring program output; although a day care center with a larger enrollment may be cheaper per child

than one with a smaller enrollment, it probably delivers somewhat different services (in quantity or quality). This point was discussed at length during the Day Care Cost Workshop.

Experimental evidence on economies of scale in existing day care operations is scant. Controlled experiments, measuring both costs and output from related delivery units of different size have not been undertaken. Because of the individual characteristics of the settings of child care facilities, it would be a challenging undertaking to perform such a study with the requisite rigor. The evidence that does exist comes from a comparison of the descriptions of numerous diverse programs and their costs. Differences in the methods of collecting and analyzing costs, as well as the incommensurability of the program outputs, limit the usefulness of this data.

Some generalizations can be made, however. If the ratio of child care staff to children is held constant (as a major measure of quality of care), economies from increased scale of operation seem to be possible, mainly in the costs of physical facilities and administration. Within the discussion of the costs of day care which follows in a later section, we indicate the instances where such economies of scale are likely to occur.

Diversity Of Services Included

The day care that is provided today ranges widely in the scope of services delivered to the children, their parents, and the community. This diversity of services causes difficulties in the analysis of alternative delivery mechanisms, from the standpoint of (1) constructing models for analysis, and (2) using data from existing facilities and programs.

One approach is to set forth a detailed classification scheme that uniquely identifies any program that could be defined, according to its properties along many dimensions. Using this method, every center would be unique, and the lack of similarities would make analysis and generalizations difficult.

A more workable approach is to define a basic core of services that is common (in one degree or another) to all day care programs. In this study, we have defined this basic set of services (Standard Core plus Occupancy) as consisting of Child Care and Teaching, Local Administration, Feeding, and Occupancy. All other services fall under the categories Varying Core, and Supplemental. This structure is similar to one used in the Abt study (Reference 27). With this structure, similarities and differences among programs are more readily apparent.

Treatment of Administrative and Overhead Costs

The methods of allocating administrative and overhead costs to other cost categories vary greatly among the various studies of day care costs. In some cases, it is not clear that they have been dealt with at all. Thus, this one element of particularly dubious validity affects the results that can be obtained in an analysis of previous findings such as this one. However, local administration has been established as a separate category and an estimate of the size of that cost has been made wherever possible. We also assume that overhead costs have been allocated to the other functional areas in some reasonable manner.

In-Kind Contributions

The occurrence of in-kind contributions (i.e., non-cash donations of materials, facilities, services, or labor) is widespread

in the day care field. Its significance varies greatly from center to center. Among the twenty centers or systems of centers studied by Abt Associates (Reference 27), in-kind sources accounted for up to 64% of the total annual resources. The continuation of substantial in-kind support of day care as services become expanded under various policy alternatives is open to question. Thus, we should be concerned basically with the total resource costs of providing day care services, independent of the source of these resources.

In the studies of the costs of existing day care services, the treatment of in-kind contributions varies greatly. In some studies it is dealt with directly and thoroughly; in others, it is ignored. Therefore, one must be wary of reported costs, since they may or may not include fair estimates of the total resources expended. Participants in the Day Care Cost Workshop came back to this point time and time again. In this study, we can only report the figures recorded by others, and indicate whether or not the studies seemed to include in-kind contributions.

3. DAY CARE COST INFORMATION

General

Analysis of the costs of providing day care services is important for planning of individual day care facilities and for makeing policy decisions regarding alternative patterns for the expansion of day care and child development services.

Day care and child development services, as curently delivered, are highly diverse in terms of goals, resources employed to meet those goals, children served, supplemental services offered, and sponsoring organizations. Innovations and variations of existing patterns keep occurring; we must expect the current diversity to broaden in the future. Because of this diversity, it is difficult to speak of "the" cost of day care. Adding to this fundamental difficulty is the fact that cost information on current day care facilities has serious deficiencies:

- Few cost studies of existing institutions have been made with any precision. Other than the 1966 Brandeis study of six facilities (Reference 19) and the 1971 Abt study of twenty facilities (Reference 27) which were thorough, rigorous, and well-reported, most studies have used methods that were imprecise.
- There exists great variation among cost categories defined and used in existing studies. This does not permit comparisons of study data.
- Variation in the types of facilities for which there is data is great, in terms of services provided,

clientele, facilities and staff employed, urban/rural differences, and geographic spread. But the variation is random, rather than systematic, leaving significant gaps in the data base (e.g., information on family day care is very incomplete) providing no real way to make meaningful inferences from the data.

- All existing studies are historical and provide little insight into the cost consequences of the significant changes in operating environment that would accompany a large expansion of federally supported day care (e.g., effects on salary levels of teachers, on in-kind contributions from parents and others, on the availability of facilities, etc.)
- The data base lacks "richness" for answering sensitivity questions.
- Some cost items are substitutes for others and costs are not always additive (e.g., construction costs are missing in most centers because they rent facilities and therefore show annual "occupancy" charges). Also, some substitution is possible between personnel and educational materials. There exists a problem here of the use of a functional cost breakout (where personnel and materials would fall into "child care and teaching") vs. an input-oriented breakout (where "personnel" would have a"child care and teaching" sub-breakout, and "equipment/supplies" would have the same). Thus, there will always be a problem of applying cost information within any given general structure to real-life settings.

It has not been the mission of the IIS Day Care Policy Studies Group to collect original data on day care and child development services in order to overcome these difficulties -- we must live

with them. This paper therefore, represents our efforts to provide cost information that is usable for policy decision-making purposes.

Presented herein are cost figures that can be considered normative estimates, and also cost data and estimates available from other sources. The normative estimates are mostly ranges which bracket the costs for different categories of services, to reflect the wide variety of ways in which these services can be provided. Because of data limitations, no estimates are given for some categories of costs. The sources quoted include detailed cost studies on particular day care facilities, generalized normative estimates of what day care should cost, and all shadings in between these two extremes. The IIS estimates are essentially a synthesis of the information from the relevant sources, tempered by our judgement of the applicability of those sources to the cost categories considered here.

This cost information is presented for each of the following general types of day care delivery mechanisms:

- Family Day Care
- Industry-Related Day Care Centers
- Proprietary Centers or Systems of Centers
- Non-Profit Centers

For each delivery mechanism, a brief description is given that indicates the range of services and of components of the delivery system. These are rather broad ranges, to reflect the variety that exists at present and can be expected to continue. Following this description, we give estimates for costs falling into the four categories described below. Then the applicable data from other sources influencing these estimates is presented.

Four major categories of costs are employed in this presentation:

- One-Time Costs:

  These cost items primarily refer to construction, renovation, and purchase of equipment for the establishment of a day care facility, whether it be a home, a newly constructed center, or an existing building. It is a reflection of the capital requirements for getting service started. The cost information presented is on a per-child basis. It should be understood that most of the resources in this category are reflected eventually in operating costs (e.g., amortized facility construction costs can be expressed as a yearly rental charge, and the original stock of equipment can be translated into an annual replacement cost). Thus, double counting would occur if one-time costs were added in with operating costs.

- Operating Costs:

  Annual operating costs per child-year are given. The cost structure used is one adapted from a study made by Abt Associates (Reference 27), and efforts have been made to transform cost data from other sources into this format. The cost categories used are:

  Standard Core plus Occupancy
  - Child Care and Teaching
  - Local Administration
  - Feeding
  - Occupancy

  Varying Core
  - Health
  - Transportation

Supplemental

Social Services

Training and Career Development

Research

Parent Communication and Participation

- Administrative Costs:

This category refers to the administrative activities taking place above the level of the individual center, family day care home, or system of affiliated local facilities. Thus, we include the administrative overlays of the local, state and federal levels. The functions included here are the selection, licensing and periodic inspection of day care providers and the channeling of funds to them. The discussion is in qualitative terms.

- Assistance Costs:

These are activities conducted by or sponsored by the federal, state or local governments, either directly for the benefit of individual providers, or for day care providers in general. Direct benefits include assistance with grant applications, program design and implementation, and technical assistance with operating problems. General benefits include research and development activities, primarily in educational programs and materials, but also in facilities design, the organization of activities, and management aids. No dollar estimates are given, but some indication of possible activities is made.

Delivery Mechanisms In The PSG Project

One activity of the PSG project was to describe and evaluate

alternative means of delivering day care services. Eight delivery mechanisms devised to represent the range of methods of providing day care are discussed in Part V of the final report, "Challenges in Day Care Expansion."

For this analysis, we have selected only four of the delivery mechanisms for organizing the day care costs, because of the severe data limitations; the data that does exist can best be organized according to these four categories, and still represent a broad range of service delivery methods.

The relationships between the four delivery mechanisms of this paper and the eight found in the "challenges" paper is shown in the chart below.

"Challenges in Day Care Expansion" paper	This Paper
Family	Family
Industrial	Industrial
Systems	Proprietary Systems
Cooperative Day Care	Non-Profit
Private Community-Controlled Day Care	
Publicly-Funded Community Day Care	
Private Not-for-Profit Day Care	
Private Center Day Care	No Counterpart

Day care delivery mechanisms could be categorized as Private Non-Profit, Private Profit, and Publicly Operated. This three-part classification is used elsewhere in the PSG analysis. Of the four delivery mechanisms used in this paper, Proprietary Systems corresponds to Private Profit, and Industrial fits into the Private Non-Profit category. The Non-Profit and Publicly

Operated, and Family Day Care can be either Private Profit or Publicly Operated.

These relationships are summarized below:

This Paper	Other PSG Analysis
Proprietary Systems	Private Profit
Family	Private Profit, Publicly Operated
Non-Profit	Publicly Operated, Private Non-Profit
Industrial	Private Non-Profit

Relationship To Alternative Federal Strategies

Three potential federal strategies for providing day care and child development services described by the PSG form a basis for the analytical activities of the project. Another PSG paper titled "An Explication of Some Alternative Federal Day Care Strategies for the 70's" presents these three strategies.

The delivery mechanisms examined in this paper vary in their appropriateness for carrying out these strategies. The following table summarizes the matching of day care strategies to the day care delivery mechanisms analyzed here.

Alternative Day Care Strategies

Delivery Mechanisms	Day Care for Low Income Families	Day Care and Child Development for Low Income Families	Day Care Services Available to All Working Families
Family	Delivery mechanism is applicable	Delivery mechanism needs more services than are now normally provided to be applicable	Delivery mechanism is applicable
Industrial	Delivery mechanism is applicable	Delivery mechanism needs more services than are now normally provided to be applicable	Delivery mechanism is applicable
Proprietary Systems	Delivery mechanism is applicable, provided changes are made to make services more available to low income families	Delivery mechanism needs more services than are now normally provided to be applicable	Delivery mechanism is applicable, provided changes are made to make services more available to low income families
Non-Profit	Delivery mechanism usually provides more services than are required	Delivery mechanism is applicable	Delivery mechanism usually provides more services than are required

The generalizations expressed in the table above should be tempered with the realization that they derive from historical information about the four kinds of delivery mechanisms examined in this paper. The characteristics of these delivery mechanisms may change over time in ways that make some of these methods of providing day care services more or less applicable to the alternative strategies.

Family Day Care Costs

Description - Family day care settings provide care for most children cared for by persons outside the child's home. This ubiquitous type of day care facility takes many forms; it is the most responsive of all provider types to the individual preferences of the parents of the children being cared for, and it exists in all socio-economic settings. Efforts to characterize this diversity by a single prototype must necessarily meet with some frustration, and are further hampered by a lack of comprehensive information on family day care settings. However, a prototype which fits somewhere into the range of situations that exist is described here.

For our purposes, we will consider family day care to be a facility that is an integral part of a private residence at which care is provided for a number of children ranging in age from two to five, including the provider's own children, if any. Care is provided on a regularly scheduled basis, but the schedule may vary from child to child, and may be altered frequently at the convenience of the children's parents. Most children are cared for on a full-day basis, but half-day children and other schedule variations result in fewer than the maximum number of children being in attendance during a large portion of the day. If the total enrollment is four, the average hourly attendance (equivalent to average daily attendance) may be 2.5.

In the following discussions of one-time costs, operating costs, administrative costs, and assistance costs, point estimates and ranges of costs are given wherever possible. These represent an amalgamation of the cost information contained in the studies discussed in the section "Data Sources," tempered by some judgment as to the applicability of that data to this kind of day care facility.

One-Time Costs - We assume that the family day care home must have some minor renovations done to it in order to meet any state, local, or federal requirements that may exist. These would be primarily safety-oriented changes (gates at stairways, the provision of lead-free wall surfaces, etc.) and would exclude major structural changes to the existing building. At a cost of $500 per facility for making these changes, the cost per enrolled child would be about $125, or about $200 per average daily attendance. Equipment costs (which include chairs, cots, outdoor play equipment, large durable indoor play items, and equipment for meal preparation) would come to about $30 per average daily attendance. These items would be expected to last at least two years, which is roughly the expected life of a family day care facility.

Operating Costs - Family day care homes generally operate on an informal basis, and disregard the trappings of business operation. This contributes to the lack of data on the costs of operation of family day care homes. Another aspect of this informality is the low level of remuneration for these providers; lacking firm cost information and the ability or desire to utilize it, family day care providers are believed by some to earn far less then what they could earn doing comparable work on an hourly basis. In addition, family day care providers further subsidize the children under their care by not recapturing a fair charge for the use of their homes and equipment in the fees collected. Because of these and other instances of in-kind contributions, figures for the real resource costs of family day care are difficult to come by.

Ranges for three categories of costs, representing a range in the quality and extent of services, are:

- Standard Core and Occupancy -- includes child care, teaching, feeding, occupancy, and local administration

costs -- $1200 to $1700 per child-year (average daily attendance basis), or possibly up to $2750 per child-year for the upper bracket care, if a full adjustment is made for in-kind contributions.

- Varying Costs -- includes health and transportation -- $20 to $60 per child-year.
- Supplemental Costs -- includes training, parent communication and involvement, and social services -- $125 to $625 per child-year.

These costs assume the existence of a central structure providing assistance, some supervision, and administrative activities to a network of semi-independent family day care homes. Without this administrative overlay, Standard Core costs for most family day care homes would be reduced by $100 to $200 per child-year. Also, most of the Varying Supplemental services would be foregone.

Administrative Costs - Local administrative costs are contained in the Standard Core operating costs above. Other costs of administering a program having family day care facilities include the selection, licensing, and inspection of candidate homes, and the channeling of federal, state, and local funds to the providers.

We can say little regarding the costs of licensing and inspection except that the task is easier for each family day care facility than for any center serving a larger group of children. This relates to the complexity and size of the facilities and the fact that the building or renovating of a day care center would occupy the licensing staff for a number of months; whereas a potential family day care home would be put into shape or rejected altogether in a shorter period of time. We would expect, however, that this advantage of family day care homes over centers would be outweighed by the much greater number that would be needed to serve a given number of children.

Thus, family day care facilities would cost more to license and inspect annually, for a given number of children.

This same factor could be expected to cause the cost of distributing funds to the individual providers to be higher for family day care, relative to other delivery mechanisms. This difference would be minimized, however, if a voucher system were in effect, because the primary factor in determining this administrative cost would be the number of families receiving vouchers, not the number of family day care homes or other day care centers accepting them.

Assistance Costs - The Operating Costs given above include an amount for training in the Supplemental Cost category that ranges from $110 to $180 per child-year. This would include orientation sessions for new day care mothers and in-service supervision and training. Numerous other training and staff development mechanisms suggested could be utilized -- from high school, college, and post-graduate courses in child development and family relationships, to one-time or periodic home-study materials, to educational television programs coordinated with programs for children. Because of the variety of possible training programs, no per-child cost estimates are given.

Because of the diversity of experience and competence that would be expected among the family day care providers, it would be particularly beneficial to develop curriculum aids and materials on some sort of centralized basis. (Many centers with highly trained staff members would develop their own materials and curriculum.) One could conceive of this as being accomplished by providing grants to numerous organizations to produce diverse materials, which would be offered to family day care providers for their use. A large portion of the costs of these materials is contained in the

Standard Core Operating Costs, but the federal government would underwrite the cost of the development of these materials.

It is not envisioned that the process of qualifying as a family day care home would be a very complicated one. Thus, technical assistance directly to the providers for planning and proposal writing would not be necessary. However, assistance of this sort to the local coordinating agencies may be desirable. The relationship between this activity and its attendant cost per child-year is obscure.

Data Sources - As mentioned above, cost data on existing family day care facilities is scarce. One study, however, investigated costs in some detail for a system of family day care homes. Of the twenty "exemplary" centers or systems of day care providers studied by Abt (Reference 27), one was devoted entirely to family day care. With no in-kind contributions counted, the full cost per child-year was reported as $1743 (Standard Core and Occupancy, $1638; Varying Care, $45; Supplemental, $63). Counting in-kind contribuitons, the total rose to $2287 (and the components to $2104; $61; $122). If an adjustment is made for underpayment for wages and occupancy costs, the total rises to $2960, and Standard Care plus Occupancy rises to $2777. Relative to the other facilities in this study, the family day care system had about average costs, except for the Administration and Feeding categories, which were higher than the average of the other study sites.

The standards and costs for day care developed by the Department of Health, Education, and Welfare Office of Child Development in 1967 (reported in Reference 29, pp. 130-137) contain pro forma budgets for three levels of what is termed Foster Day Care. The costs are "built-up" from a description of the inputs assumed for each level of care. The applicability of these estimates here is

somewhat restricted by the emphasis on children under three years of age in Foster Day Care, but the estimates made are worth reporting:

	Minimum	Acceptable	Desirable
Standard Core and Occupancy	$1219	$1590	$1690
Varying Core	20	20	60
Supplemental	184	422	622
Total Annual	$1423	$2032	$2372

Industrial Day Care Costs

Description and Costs - Day Care services provided to the children of working parents through the active cooperation of their employers could be considered industrial day care. It implies more than just subsidy or cost reimbursement schemes; Industrial day care is provided at or near the place of work, and the employer would take some part in the planning and running of the day care facility.

Industrial day care at present resembles group day care of the non-profit type. The few industry or labor-sponsored centers that exist in this country stress a high educational component and close attention to quality of staff, materials, nutrition and facilities. It is conceivable that industrial day care may evolve into well-organized proprietary day care systems, with a reduced emphasis on child development and more attention paid to efficiency of operation.

One distinguishing characteristic of industrial day care is the location -- near the parents' place of work. For facilities located in downtown locations or in highly developed industrial areas, this will result in higher-than-ordinary occupancy costs, adding perhaps $100 to $200 per child-year to the Standard Core costs. We would expect construction and equipment costs to be at a 10% to 25% premium over costs incurred for similar facilities in less costly areas.

Another cost-related characteristic of industrial day care centers would seem to be a lack of opportunity for in-kind contributions to help offset the total dollar outlays. The total budgets would tend to be a better reflection of total resource expenditures than budgets of in-kind help from parents, teachers, and volunteers. Two areas where in-kind contributions may be common, however, are in employer-subsidized occupancy costs (especially if the facility is housed in a building operated by the employer) and in feeding costs, where state or federal programs are available to educational organizations.

Local internal administrative costs would be similar to those of the non-profit or proprietary types, and are contained in the Standard Core plus Occupancy category for these types. Broader range administrative costs would depend largely upon the nature and extent of governmental support and participation in the provision of day care services in an industrial setting. At one extreme, there might be minimal interaction between industrial day care facilities and government bodies, limited perhaps to the building inspection that many public places are subject to. At the other extreme, intricate grant processing, negotiation, licensing, periodic facility and program inspection and supervision, etc., would create the need for substantial administrative structure and cost. This would be of a comparable magnitude to the administrative system employed in conjunction with non-profit day care centers. The system that will eventually evolve is largely conjectural at present.

It is envisioned that the educational materials and aids, plus government sponsored training programs would be available to industrial day care facilities at costs approximating the "production" costs of these aids. The development of these materials and programs would be undertaken as a general expense not easily allocated to individual centers. The amount of direct technical assistance

given to centers in preparing grant applications, in program development, and program start-up may be either very little or substantial, depending on the amount of governmental involvement that is deemed acceptable by the operators and the public-at-large.

Data Sources - Cost and other information on existing industrial day care centers is rather sparse.

The KLH Child Development Center started as a facility dedicated to one manufacturing company, but later began to sell most of its day care "slots" to individuals, other local employers, and the state welfare department. Thus, it is not strictly an industrial day care center, but its cost information can be taken as indicative of center costs near a business or industrial setting. Child development services are stressed, the staff-to-student ratio is high, it is located in a high rent industrial site, and the costs reflect these factors. Cost data from Reference 7 yields the following costs per child-year, based on an enrollment of 70 children. (Feeding costs were adjusted to account for the value of an anticipated federal subsidy, and in-kind donations of medical services were valued as being equivalent to services formerly purchased.) These costs are derived from an analysis of accounting data.

Standard Core and Occupancy	
Child Care and Teaching	$1210
Administration	295
Feeding	360
Occupancy	393
Total SC&O	$2258
Varying Core -- Medical	23
Total Annual Costs	$2281

The costs of several work-related day care facilities in the Washington, D.C. area were compiled for an internal report and proposal at the Urban Institute (Reference 17). These costs are estimated on different bases and the treatment of such items as in-kind contributions and occupancy costs are unknown. Thus, they should be regarded as tentative estimates. Nevertheless, the information available is reported here to illustrate the range of existing or proposed facilities that resemble our concept of industrial day care.

Facility	Capacity	Costs
Georgetown University Hospital	15 Children	$1450/Child-year
Department of Labor	60 Children	$2000/Child-year
C&P Telephone Co.	100-110 Children	$1600/Child-year--"basic program" $400-$500/Child--"starting cost" plus $150/Child--"equipment"
Federal City College	47 Children	$1500 to $2000/Child-year $120,000 "first-year costs"

Information on child care centers operated by a labor union, the Amalgamated Clothing Workers of America, AFL-CIO, is presented in Reference 29, pp. 193-214. A center started in 1970 in Chicago now serves 60 children. The yearly cost (exclusive of occupancy costs) was reported as $2800 per child over the first year (during which enrollment averaged less than the 60-child maximum). The total first-year cost for the center was given as $140,000. Economies of scale are illustrated by the fact that operating costs at one small (50-child) center run about $50/week/child, ($2600/year/child), while in large centers (over 200 children), similar services are provided for $25/week/child ($1300/year/child). Construction costs for six centers are listed as follows:

Center	Capacity	Total Construction Cost	Construction Cost per Child
Chicago, Ill.	60	$125,000	$2083
Hanover, Pa.	80	200,000	2500
McConnellsburg, Pa.	80	220,000	2750
Staunton, Va.	240	400,000	1667
Chambersburg, Pa.	300	700,000	2333
Baltimore, Md.	300	800,000	2667

The methods used for arriving at these costs were not indicated.

Proprietary Systems of Day Care Centers

Description - The provision of day care services for profit is being carried out by an increasing number of business organizations. The impetus for getting into the day care business, the corporate structures, and the organizational forms vary, but most such operations have more than one facility, or are clearly intending to expand their operations to multiple facilities (Reference 13). There is substantial variation, too, in the amount of educational components included in these day care systems; some centers provide little more than custodial care, while others are using new techniques and devices, developed at considerable cost to the proprietors.

One unifying theme in this mixed picture is the incentive to keep costs low in order to turn a profit. This results in staff-to-student ratios that are lower than those found in non-profit centers, in generally lower administrative and overhead costs, and often in an absence of those services which make up the Varying Core and Supplemental cost categories. These differences form the basis for the debate on quality of care in proprietary vs. non-profit centers. There is no question that proprietary centers provide a different kind of care from that provided in non-profit

centers, but the differences go beyond simple cost-cutting measures; and in some cases, entail innovations which may actually improve the quality of services. The sections which follow are intended to bring out the cost characteristics of proprietary day care systems without taking sides on the quality issue.

One-Time Costs - A major item in start-up costs is the construction or renovation of facilities. Construction is often an attractive alternative in neighborhoods with available land, and unavoidable in developing apartment complexes. Some proprietors contend that ground-up construction can be cheaper than renovation, and the result is a more preferable facility. For the 30-to-100 child range of facilities, construction can run from $600 to $2000 per child, depending upon the geographic and urban/rural location, and the facilities provided. We have only indirect evidence that the purchase and renovation of an existing building would fall into the same range. However, it is possible that the initial cash outlay can be minimized by leasing facilities and then renovating.

Initial equipment tends to cost about $300 per child.

Total cash requirements for the startup of a proprietary facility can range from less than $500 per child (for a center in leased, immediately usable space) to well over $2000 per child. There are too many combinations of veriables to make generalizations about total start-up costs.

Operating Costs - The push for lower costs in proprietary day care centers results in a lower percentage of total costs being devoted to personnel expenditure -- 40% to 50% vs. about 65% for non-profit centers (Reference 16). In some cases, there is a substitution of equipment and educational software for personnel (as reported in Reference 15); but more often there is no tangible substitution

for personnel and the children simply receive less individual attention. But in most cases, the costs of child care and teaching predominate over the other operating cost categories. Approximate ranges are given below:

Standard Core and Occupancy

Child Care and Teaching	$300-$900 per child-year
Administration	60- 300
Feeding	0- 150
Occupancy	150- 625
Total Standard Core and Occupancy	$560-1575
Varying Core and Supplemental	15- 40
Total Operating Costs	$600-$1600 per child-year

It is not clear from the data available what portion of the above costs goes to elements of Varying Core and Supplemental costs such as health, parent involvement, and social services. It is likely that training and staff development is as big an item as all of these, and may be subsumed under the Child Care and Teaching, or Administrative categories. All of the operating cost items but occupancy fall below the range encountered for exemplary day care centers (Reference 27).

Administration Costs - The costs of administration at the center level and within a proprietary organization's corporate system are contained in the Operating Costs, above. Additional administrative costs at present are confined to routine licensing and inspection of facilities. The extent of future government involvement in the affairs of proprietary day care systems has yet to be determined. If proprietary systems continue to receive little, if any, government support, the amount of interaction and the attend-

ant administrative costs will remain at the present low level. Even if substantial federal government funds flow to proprietary centers in the future, there is sure to be more resistance to governmental contact among these centers than among non-profit centers. Thus, the costs of performing these restricted administrative activities will be somewhat less than for the non-proprietary centers.

Assistance Costs - We can expect proprietary centers to benefit as much from general child care education activities as would the other providers of day care, and we do not anticipate any federal training programs directed specifically towards the workers in proprietary centers. There may, however, be some expenditure involved in passing along information and skills to would-be proprietors, via the Small Business Administration, community development corporation technical assistance, etc. This would be comparable to the technical assistance provided to groups wishing to start non-profit centers.

The trend toward the development of curricula, materials, teaching aids, devices, and software by individual firms will continue for a while, but we should expect to see some consolidation of this diversity in the future, both through merger of existing facilities and through the marketing of educational hardware and software by a few successful firms. Thus, the research and development burden will ease by being spread over a larger base of providers. The federal government will probably take on a greater portion of these costs, as programs are developed with public funds for distribution to other groups of day care providers.

Data Sources - A number of sources of data on the variety of proprietary day care centers exist.

A study done by researchers at Brandeis University (Reference 19) estimates the costs of a single proprietary center, serving an average of 25 children, by means of a detailed time study of activities at the center. The following costs were encountered in 1964:

Standard Core	$451 per child-year
Varying Core (Transportation)	145
Supplemental	2
	$598 per child-year

It should be noted that a charge for occupancy costs has not been included in the above figures.

The annual operating costs for five investor-operated proprietary centers belonging to systems (or serving as the prototypes for future additions to systems) were reported in Reference 16. Ranges for the cost categories reported are given below, along with the locations of the facilities with the high and low extremes (per child-year costs).

Child Care and Teaching	$281 (Phoenix) - 895 (N.Y.C.)
Administration	58 (Phoenix) - 300 (Cherry Hill, N.J.)
Nutrition	0 (Tampa) - 123 (Nashville)
Occupancy	154 (Phoenix) - 625 (Cherry Hill)
Miscellaneous	15 (Nashville) - 37 (Phoenix)
Total	$600 (Phoenix) - 1600 (N.Y.C.)

All these costs were for the 1968-1970 time period, but were estimated by different individuals, presumably using somewhat different standards.

These centers range in daily attendance from 55 to 200. Two of

the centers expected to move to full capacity in the near future, thereby lowering their per child costs, but the extremes for total costs listed above would still remain.

In the area of start-up costs, the following items have some relevance:

- Multimedia Education has invested $200,000 in curriculum development (Reference 14).
- The Singer Learning Center in Cherry Hill has room for 300 children, and is housed in a $500,000 building, on a $150,000 parcel of land. Total investment for six units is expected to reach $5 million (Reference 13).
- Established centers of a franchised chain of day care centers sold for about $20,000 each, as reported in Reference 13.
- In an advertisement for franchises, L'Academie Montessori, Inc. cites a figure of $25,000 cash investment as being necessary for a 50% interest in a new "turn-key" operation (Reference 14).
- Palo Alto Educational Systems lists start-up costs at $18,800 per center, (Reference 16) for leased, renovated space.
- A brochure put out by American Child Center, Inc. (cited in Reference 22) lists minimum cash requirements for opening a center as follows:

Territorial license fees	$15,000
Director training fees	1,500
Opening fee	2,500
Signing of lease agreement	175
Equipment down payment (25%)	6,300
Working capital	5,000
Total	$30,475

- Starting costs for a 30-child nursery were estimated in Reference 30, quoted in Reference 22.

Building	$30,000	to	$45,000
Miscellaneous items for building	150		250
Medical and housekeeping supplies	130		200
Teacher's lounge and office equipment	325		425
Kitchen equipment	2,525		3,250
Children's furniture	2,000		3,000
Outdoor play equipment	1,000		1,500
Indoor play equipment	1,250		2,000
Operating costs for 3 months	7,200		9,000
Total Starting Costs	$50,000		$65,000

Non-Profit Day Care Center Costs

A large variety of sponsoring organizations provide day care and child development services in centers on a non-profit basis. Providers and sponsoring organizations include local Model Cities Agencies, the Head Start Program, community action agencies, other religious, publicly or privately sponsored community action and community development organizations, and local health and welfare agencies. Also included in this category are parent cooperative nurseries and day care centers.

Within this category of day care providers, there is diversity in the sources and uses of funds, in the amount and kind of child development provided, and in the client population. Consequently, there is considerable variation in the cost incurred in the provision of these services. A great deal of diversity remains if this large category is broken down into components based upon the

type of providers. When this is done, the small amount of data that exists on the costs of each of the component categories limits the credibility of any cost estimate that could be made. The range of costs found within the larger group are reported, as this is as useful and more meaningful than separate reports on the component categories.

Despite the diversity that exists, there are underlying similarities that tie the group of providers together. The completeness of services provided is higher among non-profit centers than among other providers, parental involvement is more widespread, the staff-to-child ratio is higher, educational achievements of staff tend to be higher, and total annual costs per child are higher. It is in this category of providers that a large number of experimental or demonstration centers are found, and where special programs, facilities, materials and groupings of staff are employed in attempts to achieve certain results. The added expense of carrying out demonstration projects and contributes to the generally higher costs of day care in non-profit centers. Most parents cannot or will not pay the full cost of these services. Except for the parent cooperative centers, most centers in this category receive a substantial amount of outside support to add to any fees or in-kind contributions made by the parents of the children being served.

One-Time Costs - Non-profit centers tend to make use of existing physical facilities, usually leasing and carrying out the renovations necessary to produce the environment desired and to meet state and local regulations. These renovations often include extensive structural and plumbing changes to the inside of the facility, and some activities such as fencing outdoor yards. These costs would range from about $200 per child to about $600, depending on the condition and type of the facilities (churches,

apartments, store-fronts, or other existing buildings).

Construction or purchase of facilities is not usual for non-profit centers, but where it occurs, it could range from about $500 per child for a pre-fabricated unit to the $1500 or more per child that is required for a specially designed facility of the type employed for industrial day care and proprietary center day care.

It should be understood, however, that the choice between purchase and rental of facilities is largely a matter of the availability of capital and the willingness to part with it; the purchase costs eventually get reflected in rent payments anyway, but the day care providers can avoid a large capital commitment at the outset if they rent and renovate existing facilities.

Equipment for play and education of the enrolled children costs from $60 to $90 per child. Approximately 25% of this apparatus is of a durable nature (outdoor play equipment, cots, cribs, and mats) expected to last around five years. The remainder would be consumed on a regular basis, with replacement about every two years.

Operating Costs - Non-profit day care centers generally receive considerable support from parents, teachers, sponsoring agencies, and friends in the form of in-kind contributions consisting of donated space, materials, and labor, and reduced payments for hours worked, facilities and materials. (Of the 20 centers or systems of centers in the Abt study, 15 received 10% or more of their resources by means of in-kind contributions. For four of the twenty, the percentage of total resources coming from in-kind contributions was 49% or greater. (See Reference 27).

Because of the prevalence of in-kind contributions and because of

the difficulties involved in determining their magnitude, figures for operating costs from different centers may or may not reflect the true value of the real resource costs of operating a center. It is the real resource cost that is relevant tor total program decision-making, and the costs given below are intended to reflect the magnitude of in-kind contributions. Unfortunately, the different data sources account for in-kind contributions in dissimilar ways, and many sources seem to ignore it altogether. Thus, part of the spread in costs encountered will be attributable to the inclusion or exclusion of in-kind payments, although genuine program differences probably make up the bulk of the differences in costs. A range of costs is shown below.

- Standard Core and Occupancy Costs -- includes child care, teaching, feeding, occupancy, and local administration costs -- $1230 to $3000 per child-year (on an average daily attendance basis), with $2000 an approximate median figure. Occupancy can range from $100 to $500 per child-year, feeding between $140 and $600, local administration between $150 and $700, and child care and teaching between $500 and $2200.
- Varying Core Costs -- including health and transportation -- $10 to $500, with $20 to $150 a more probable range.
- Supplemental Costs -- includes training, parent involvement and communications, and social services -- $0 to $800 per child-year, with many centers at $0 and lots of variation.

Administrative Costs - Local administrative costs are contained in the operating costs above. Other costs of administering a program having non-profit center day care facilities include the selection, licensing, and inspection of facilities, and the channeling of federal, state, and local funds to the providers.

Currently, most non-profit centers come into existence through the efforts of local people who perceive a need for such services and find the means for support and for bringing the center into

operation. Thus, there is presently a self-selection process at work, and much of the time and effort involved in this is donated by individuals or other organizations such as community action agencies and parent cooperative groups. If a federally-sponsored expansion of day care services were to include a large number of new non-profit centers, we would expect that the process would become more formalized and perhaps more costly, as more resources are put into encouraging and educating the local people who are needed for implementing a new center. The costs would become more visible, too, as larger administrative bodies would be needed at the federal, state, and local levels to publicize, educate, receive proposals, and administer grants of assistance for initiating and operating non-profit centers.

In addition to the added administrative costs for establishing and funding expanded non-profit services, there would continue to be a need for the licensing and inspection activities. The costs of providing these functions per facility should remain at about the same level as at present.

The length of time for the licensing process will continue to be longer than for family day care facilities (because of the longer duration and more extensive nature of the renovation or construction process). However, because of the larger number of children accommodated in centers, the cost per child is less than for a family day care program.

Assistance Costs - Assistance to non-profit centers includes training of personnel as a prime component. In addition to the "in-service" training or career development of staff included in supplemental operating costs, and estimated at $150 per child-year, the federal government may well contribute to this effort on a broader basis, with benefits flowing out not only to non-profit centers, but to

all providers of day care services. These might include high school, college, and post-graduate courses in child care, one-time or periodic home-study materials, or educational television programs coordinated with programs for children.

The development of program materials and educational equipment is achieved in a number of ways, and this diversity should be continued. Some centers or university affiliations have developed their own curricula and materials. As more experience is gained with these materials, the federal government may make arrangements to disseminate this knowledge to other centers. Similarly, the programs and materials developed by proprietary providers may be purchased by the government for distribution to other profit or non-profit centers. This could be a research and development effort of some intensity for 3 to 5 years, then as a distribution, monitoring, evaluation, and up-dating effort to continue into the future. Some portion of the present cost of educational materials and curriculum development is reflected in the child care and teaching costs of individual centers, but separate, additional funds would be needed for a research and development effort.

There would be additional assistance costs involved in helping organizations in the writing of proposals and grant applications and in handling development and operating problems as they arise. The advice and assistance in the application process would be fairly universal, even if it only consists of responding to telephone inquiries.

Data Sources -- Cost data on non-profit day care in centers comes from a number of sources. These sources, however, employ different cost break-downs, and different assumptions regarding in-kind contributions, and apply to programs and centers providing widely different sets of services. Because of this, comparability of

cost data is severely restricted. We present here the estimates made by several organizations, and try to indicate the nature of the assumptions and systems considered by each.

Westat Research Corporation (Reference 3) conducted a nationwide survey of day care providers, and received descriptive and cost information on a sizable sample of centers of all types, except for family day care units. There is no break-down of operating costs into the categories that we find most useful, and the nature of the survey precluded making accurate estimates of in-kind contributions, or making clear distinctions between operating and capital costs. In addition, we feel that, with the self-reporting method, some under-estimating of costs must have occurred.

Three categories of centers were established, based on a measure of the completeness of the package of services provided. The category with the most nearly complete set of services consisted of 83% non-profit centers while the middle and lowest categories had 32% and 21% non-profit, respectively. Therefore, the most complete category is the most relevant for our purposes. Some relevant measures are listed on the following page.

In addition, it was reported that proprietary centers receive 98.7% of their revenues from parent fees, whereas non-profit centers receive only 21.5% from fees. The total annual costs per child were estimated at $458 for proprietary centers and $1140 for non-profit centers.

Some total program cost information has been assembled from various surveys by the Research Division of the National Education Association. The consistency of these findings with other data sources is open to question. Public school kindergarten ranged in cost from $150 to $800 per child (Reference 21). Office of

Measures	Categories of Centers		
	Most Nearly Custodial	Intermediate	Most Nearly Complete
Median number of months in operation	60+	60+	37
Number of children per center	33	49	52
Percent children full day	84	64	80
Percent proprietary	79	68	17
Percent that own facilities	79	63	18
Cost of child-related equipment	$61/child	$85/child	$77/child
Annual cost per child	$325	$540	$1,370
Percent of total costs that are personnel-related	52%	58%	38%

Economic Opportunity estimates of full-year costs of Head Start programs operated by public schools ranged from $349 to $1875 per child, with a mean of $827 per child (Reference 20). Nursery school programs in public schools ranged in total annual cost from $78 to $2000 per child, with a mean of $513 per child (Reference 23).

Day care services sponsored by and paid for by the City of New York are operated and instigated on a local basis. A sample budget for a center designed for 55 children estimates annual operating costs per child-year as $2214. This includes about $33 per child-year for heat, gas, light, and liability and fire

insurance, but the major portion of occupancy costs (i.e., rent) is not included in the above figure (Reference 28, p. 88). The source of these estimates was not indicated.

A standard budget for a center with a capacity of 30 to 35 children was prepared by the National Capital Area Child Day Care Association Inc. as guidance for persons desiring to start up centers in the Washington, D.C. area (Reference 4). This budget appears to combine both empirical and normative figures. Standard Core Costs came to $1910 per child/year, Varying Core Costs were $113 per child/year, and Supplemental Costs were $36 per child/year; totaling $2050. This included the cost of leased facilities, but not the cost of renovations.

Budget figures for a proposed program of care for infants, 3- to 5-year-olds, and 6- to 12-year-olds, were prepared by the Christian Action Ministry of Chicago (Reference 5). The relationship between the budgeted costs and the costs actually experienced is unknown. Preliminary costs estimated at $90,000 include $84,000 for purchase of a prefabricated unit and renovation of six existing units. Supportive Services for the care of 160 infants in group homes was estimated at $9711, or $61 per child, but this is very limited service and excludes the other program elements. For the older age groups, the following costs apply.

		Program Costs Only	Program and Administration Costs
240	3- to 5-year-olds only	$2040	$2850*
178	6- to 12-year-olds only	248	1055*
418	children in both groups	1280.	2084

*Administration costs pro-rated to these two age groups on the basis of total number of children in each age group.

The two full-day non-profit programs included in the 1966 Brandeis study (Reference 19) reported the following costs (in 1964).

	"Milltown"	"Association"
Standard Core	$1095	$1090
Varying Core	8	11
Supplemental	68	85
Total per child-year	$1175	$1187

These costs do not include rent or other occupancy charges, and may neglect some in-kind contributions, but are based on time-and-motion studies of a well-defined list of functional activities.

The 1967 Standards and Costs for Day Care from the Office of Child Development include figures for group care in a center. These are applicable to the situations under consideration here. These cost estimates are prescriptive or normative in nature.

	Quality Level		
	Minimum	Acceptable	Desirable
Standard Core	$1230	$1692	$2035
Varying Core	20	80	120
Supplemental	173	355	545
Total	$1423	$2127	$2700

The Abt study (Reference 27) was directed at centers and day care systems that were considered to be exemplary in the services that they provided. Case studies of these 20 situations were

conducted, including detailed cost information, and budgets for prototype "quality" centers were constructed. These pro forma budgets, for centers of 25-, 50- and 75-child capacities, reflect an amalgamation of diverse conditions found in the 20 case studies, and are presented as general planning guides. It must be understood that variations in program and in local social and economic conditions would cause variations in the actual costs incurred by any center designed on one of these models.

Listed below are the pro forma annual per-child budgets for the three core program designs, plus the range found within each category for the 15 centers or systems which most closely resemble non-profit centers. These figures are total resource costs, and include any in-kind contributions. The centers in the Abt study were found to receive between 0% and 64% of all revenue from in-kind contributions.

	Abt Core Programs Average Daily Attendance			Range Among 15 Case Studies	
	25	50	75	Low	High
Standard Core Costs	$2022	$1908	$1979	$ 970	$3005
Child Care & Training	1232	1249	1232	505	2270
Administration	514	423	435	147	841
Feeding	276	236	212	116	683
Occupancy	294	282	277	127	480
Varying Core	33	33	33	16	516
Health	33	33	33	16	516
Transportation				0	227
Supplemental	0	0	0	0	838
Social Services				0	573
Career Development				0	740
Research				0	118
Parent Participation				0	299
Total	$2349	$2223	$2189	$1275	$4147

4. SUMMARY OF THE DAY CARE COST WORKSHOP

The Institute for Interdisciplinary Studies organized, sponsored and ran a workshop on the costs of day care on May 17-18, 1971, in Arlington, Virginia. The purpose of the workshop was to bring together people with expertise in the provision of day care services for an open exchange of views and information on the general subject of costs. Participants included individuals from state and federal governmental bodies concerned with day care policy and planning questions, individuals active in the actual delivery of day care services in proprietary and non-proprietary settings, and researchers in the field.

Twelve formal presentations were made by workshop participants, covering a broad number of aspects of services. Open discussions following each presentation allowed for questions, the assertion of alternative opinions, and debate. One session was devoted to a general discussion by the participants of a number of issues that arose during the course of the workshop. Proceedings of the workshop -- separately bound -- are presented in the Appendix to this report.

The papers and their authors are:

"Techniques of Analyzing Costs and Cost-Benefit Ratios for Day Care" -- Delroy Cornick

"Strategy for Day Care Cost Analysis" -- Keith McClellan

"Community Assessment of Day Care Needs and Services" -- Richard Zamoff

"The Economics of Child Care: Two Critical Gaps" -- Mary Rowe

"Cost Analysis from 'A Study in Child Care, 1970-71'" -- David Warner

"Family Assistance Day Care In Vermont" -- Robert G. Stauffer

"Computer-Based Model to Analyze Costs of Day Care" -- Donald G. Ogilvie

"Day Care Start-up Costs" -- Richard Grassgreen

"Public Agency Purchase of Day Care Services" -- Alan R. Pittaway

"Reimbursing Day Care Costs" -- Burton Sonenstein

"International and Cooperative Day Care Programs" -- Cynthia Jones

"Massachusetts Early Education Project" -- Robert Fein

Within the general discussion, the following areas of interest were brought up in relation to day care costs.

- Federal-state-local responsibilities for day care
- Parent participation
- Income redirection
- Implementation
- Regulation
- Facilities
- Expansion of day care
- After-school care

Other issues discussed throughout the conference included:

- Definition and purpose of cost analysis
- Classification schemes for day care centers
- Functional cost categories vs. accounting cost categories
- Methods for allocating occupancy and administration costs to functional categories
- Areas where further research is needed
- Appropriate definitions of unit costs
- In-kind contributions
- Start-up costs and investment decisions
- Economies of scale

It would not be accurate to say that a consensus was reached on most of these issues by the workshop participants. On the contrary, most of the discussions were spirited expositions and defenses of conflicting views on many subjects. This atmosphere resulted in most participants refining and broadening their stances on cost analysis of day care services. The exchange of ideas had a definite influence on the cost analysis presented in this paper, and is reflected in the discussion of issues found in Section 2, Issues in Day Care Cost Analysis.

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A P P E N D I X

The appendix to this report is separately bound, as Volume 2 of Part IV.